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Sarkozy et al.

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[54] **APPARATUS AND METHOD FOR STORING DATA WITH SELECTABLE DATA PROTECTION USING MIRRORING AND SELECTABLE PARITY INHIBITION**

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[58] Field of Search **711/112, 114, 711/113; 395/182.05, 182.04**

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[57] ABSTRACT

A protection mechanism for use in a mass storage system for providing user selectable levels of protection against data loss wherein storage segments of a plurality of disk drives are organized into at least two functionally separate logical units and a memory management mechanism is responsive to an identification of a logical unit as selected for mirroring by writing a first copy of a data block assigned to a first storage address in a designated logical unit into the assigned storage address in the designated logical unit and writing a second copy of the data block into a second storage address in the disk drives wherein the second storage address is skewed with respect to the first storage address so that the second storage address is located in a disk drive separate from the data disk drive containing the first storage address, and writing at least one parity block containing parity information relating to the data block into a disk drive. The mechanism allows a user to select to write data blocks to the disk drives without corresponding parity information being stored in the disk drives, and to later enter the parity information.

10 Claims, 7 Drawing Sheets

